TABLE 6. PROPOSED FIELD PROGRAM FOR SOIL INVESTIGATION

Sample Location	Sample Medium	Rationale	Nunber of Sample Locations	Sample Identification	Sampling Tool	Sampling Depth (ft bgs)	Field Screening by PID	VOCs (includes EDB)	PAHs (SIM)	SVOCs	TAL Metals (includes Mercury)	Analysis Cyanide	Hexavalent Chromium	Pesticides	PCBs	Dioxins/ Furans
Lorraine Process Area			26	LPA-SB-01-0.5 through LPA-SB-26-0.5	T	0.0 - 0.5	Vac	26	26	26	26	26	0	0	0	1 0
	Surface soil	To assess potential	26 26	LPA-SB-01-0.5 through LPA-SB-26-0.5 LPA-SB-01-2.0 through LPA-SB-26-2.0		0.0 - 0.5	Yes Yes	26	26	26	26	26	0	0	0	0
, , b , (1D4)		source areas and	26	LPA-SB-01-6.0 through WPA-SB-26-6.0	Split spoon	2.0 -6.0	Yes	26	26	26	26	26	0	0	0	0
Lorraine Process Area (LPA)	Subsurface soil	delineate nature and	26	LPA-SB-01-10.0 through LPA-SB-26-10.0	Continuous sampler PVC/acetate sleeve	6.0 - 10.0	Yes	26	26	26	26	26	0	0	0	0
	Subsurface soft	extent	26	LPA-SB-01-?? through LPA-SB-26-??		2 ft interval above refusal	Yes	26	26	26	26	26	0	0	0	0
	Surface soil		4	LPA-SB-27-0.5 through LPA-SB-30-0.5		0.0 - 0.5	Yes	4	4	4	4	4	4	0	0	0
	Surface son	To determine if	4	LPA-SB-27-2.0 through LPA-SB-30-2.0	Split spoon	0.5 - 2.0	Yes	4	4	4	4	4	0	0	0	0
Lorraine Process Area (LPA) Cooling Pond		cooling pond is a	4	LPA-SB-27-6.0 through WPA-SB-30-6.0	Continuous sampler	2.0 -6.0	Yes	4	4	4	4	4	0	0	0	0
Cooling Pond	Subsurface soil	source area	4	LPA-SB-27-10.0 through LPA-SB-30-10.0	PVC/acetate sleeve	6.0 - 10.0 2 ft interval above	Yes	4	4	4	4	4	0	0	0	0
			4	LPA-SB-27-?? through LPA-SB-30-??		z it interval above refusal	Yes	4	4	4	4	4	0	0	0	0
Wilcox Process Area					T		I I			I	1	I	T 110 1			
Wilcox Process Area (WPA)	Surface soil	To assess potential source areas and delineate nature and	65	WPA-SB-01-0.5 through WPA-SB-65-0.5	Split spoon Continuous sampler	0.0 - 0.5	Yes	65	65	65	65	65	Total 10 samples: 7 Randomly Selected Borings + WPA-SB-01-0.5 WPA- SB-01-0.5 WPA-SB-19-0.5	10	10	10
		extent	65	WPA-SB-01-2.0 through WPA-SB-65-2.0	PVC/acetate sleeve	0.5 - 2.0	Yes	65	65	65	65	65	0	0	0	0
			65	WPA-SB-01 -6.0 through WPA-SB-65-6.0		2.0 -6.0	Yes	65	65	65	65	65	0	0	0	0
	Subsurface soil		65	WPA-SB-01 -10.0 through WPA-SB-65-10.0		6.0 - 10.0	Yes	65	65	65	65	65	0	0	0	0
			65	WPA-SB-01-?? through WPA-SB-65-??		2 ft interval above refusal	Yes	65	65	65	65	65	0	0	0	0
East Tank Farm Area					<u> </u>					1	1	ı	1			
	Surface soil		11	ETF-SB-01-0.5 through ETF-SB-11-0.5	Split spoon Continuous sampler PVC/acetate sleeve	0.0 - 0.5	Yes	11	11	11	11	11	0	0	0	0
		To assess potential source areas and delineate nature and extent	11	ETF-SB-01-2.0 through ETF-SB-11-2.0		0.5 - 2.0	Yes	11	11	11	11	11	0	0	0	0
East Tank Farm (ETF)			11	ETF-SB-01-6.0 through ETF-SB-11-6.0 ETF-SB-01-10.0 through ETF-SB-11-10.0		2.0 -6.0 6.0 - 10.0	Yes Yes	11	11 11	11	11 11	11 11	0	0	0	0
	Subsurface soil		11	ETF-SB-01-?? through ETF-SB-11-??		2 ft interval above refusal	Yes	11	11	11	11	11	0	0	0	0
East Tank Farm (ETF)	Surface soil	To determine if this is	10	ETF-SB-12-0.5 through ETF-SB-21-0.5	Split spoon Continuous sampler	0.0 - 0.5	Yes	10	10	10	10	10	0	0	0	0
Tanks 1 and 4	Surface soil	a source area	10	ETF-SB-12-2.0 through ETF-SB-21-2.0	PVC/acetate sleeve	0.5 - 2.0	Yes	10	10	10	10	10	0	0	0	0
Total Soil Samples								550	550	550	550	550	14	10	10	10
Soil Investigation QC																
Field Duplicates	Soil			1 per 10 samples				55	55	55	55	55	2	1	1	1
MS/MSDs Soil 1 per 20 samples (extra volume only; not included in total sample count)							28	28	28	28	28	1	1	1	1	
Total Soil Samples Associated w	ith Soil Investigation	on						633	633	633	633	633	17	12	12	12
Water QC Samples																
Trip blanks	Water		1 per cooler containing equipment rinsate for equipment used in soil investigation					15	0	0	0	0	0	0	0	0
Equipment blanks Water 1 per day per set of for nondedicated equipment per team								30	30	30	30	30	1	1	1	1
Total Water QC Samples Associ	ated with Soil Inve	stigation						45	30	30	30	30	1	1	1	1

EA Engineering, Science, and Technology, Inc., PBC

TABLE 6. PROPOSED FIELD PROGRAM FOR SOIL INVESTIGATION

							Analysis									
			Nunber of			Sampling		VOCs			TAL Metals					
			Sample			Depth	Field Screening	(includes	PAHs	GY10 G	(includes		Hexavalent		D.C.D.	Dioxins/
	Sample Medium	Rationale	Locations	Sample Identification	Sampling Tool	(ft bgs)	by PID	EDB)	(SIM)	SVOCs	Mercury)	Cyanide	Chromium	Pesticides	PCBs	Furans
Background																
					ICS Methodology											
Background grid	Surface soil	Background	1	BKG-0.5	Hand auger	0.0 - 0.5	Yes	0	1	0	1	0	0	0	0	1
Buenground gird	Surrace son	Buenground	-	2110 010	Slide hammer	0.0 0.5	105	Ü	•		•		Ü	Ů	Ü	
	ļ				Scoop											1
Total Background Soil Samples								0	1	0	1	0	0	0	0	1
Background Soil QC																
Field Replicates	Soil			1 Duplicate (BKG-0.5-D) and 1 Triplicate (BKG-0.5-T)					2	0	2	0	0	0	0	2
MS/MSDs	Soil			1 per 20 samples (extra volume only; not included in total sample count)					1	0	1	0	0	0	0	1
Total Soil Samples Associated w	ith Background							0	3	0	3	0	0	0	0	3
Water QC Samples																
Trip blanks	Water			1 per cooler containing equipment rinsate for equipment used in soil investigation				0	0	0	0	0	0	0	0	0
Equipment blanks	Water			1 per day per set of for nondedicated equipment per team				0	1	0	1	0	0	0	0	1
Total Water QC Samples Associ	otal Water QC Samples Associated with Background Soil							0	1	0	1	0	0	0	0	1

NOTES:

Sample depth will vary depending upon location of sample and depth of refusal; as a result, the number of samples collected may be less than shown.

bgs = Below ground surface NORM = Naturally-occurring radioactive materials SIM = Selective ion monitoring

EDB = Ethylene dibromide PAH = Polycyclic aromatic hydrocarbon SVOC = Semivolatile organic compound

ft = foot (feet)
PCB = Polychlorinated biphenyl
TCS = Incremental Composite Sampling
PID = Photoionization detector
TPH = Total petroleum hydrocarbons
PVC = polyvinyl chloride
VOC = Volatile organic compound

MSD = Matrix spike duplicate QC = Quality control

TABLE 8. PROPOSED FIELD PROGRAM FOR PRIVATE SUPPLY WELL AND PIEZOMETER SAMPLING

			Analyses										
Sample Location	Sample Identification	Sampling Method	Field Parameters	LNAPL Characterization	VOCs (includes EDB)	PAHs (SIM)	SVOCs	TAL Metals (includes Mercury)	Cyanide	Hexavalent Chromium	Pesticides	PCBs	Dioxins/ Furans
	GW-01	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
	GW-02	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
East Tank Farm Residential Wells	GW-03	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
	GW-04	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
	GW-05	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
North of East Tank Farm Residential	GW-06	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
Wells	GW-07	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
	GW-08	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
South of East Tank Farm Residential Wells	GW-09		1	0	1	1	1	1	1	1	0	0	0
Lorraine Process Area Church Well	GW-10	Tap or Grab Tap or Grab	1	1	1	1	1	1	1	1	0	0	0
North Tank Farm Residential Well	GW-11	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
North of North Tank Farm Residential Well	GW-12	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
Wilcox Residential Well	GW-13	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
East Tank Farm	GW-14	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
Private Wells Not In Use	GW-15	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
Total Investigation Tap Samples			15	1	15	15	15	15	15	15	0	0	0
Field duplicate	1 per 10 samples		0	0	2	2	2	2	2	2	0	0	0
MS/MSDs	1 per 20 samples (extra volume only; not included in total sample count)		0	0	1	1	1	1	1	1	0	0	0
Total Private Supply Well Samples			15	1	17	17	17	17	17	17	0	0	0
Water QC Samples													
Trip blanks	1 per cooler containing aque	ous samples for VOC analysis	0	0	1	0	0	0	0	0	0	0	0
Equipment blanks	1 per day per set of for none	dedicated equipment per team	0	0	0	0	0	0	0	0	0	0	0
Total Water QC Samples Associated	with Private Supply Well Sampl	ing	0	0	1	0	0	0	0	0	0	0	0
Piezometers			<u> </u>	•				<u> </u>	·			l	
Piezometers	PW-01 through PW-10	Low Flow	10	0	10	10	10	10	10	1	0	0	0
Total Investigation Tap Samples			10	0	10	10	10	10	10	1	0	0	0
Field duplicate	1 per 10) samples	0	0	1	1	1	1	1	1	0	0	0
MS/MSDs	1 per 20 (extra volume only; not inc) samples cluded in total sample count)	0	0	1	1	1	1	1	1	0	0	0
Total Piezometer Samples			10	0	11	11	11	11	11	2	0	0	0
Water QC Samples				•							•		
Trip blanks	1 per cooler containing aque	ous samples for VOC analysis	0	0	1	0	0	0	0	0	0	0	0
Equipment blanks	1 per day per set of nonde	dicated equipment per team	0	0	1	1	1	1	1	1	0	0	0
Total Water QC Samples Associated	with Piezometer Sampling		0	0	2	1	1	1	1	1	0	0	0
NOTES: Field parameters: pH, temperature, conbgs = Below ground surface EDB = Ethylene dibromide MS = Matrix spike		ion-reduction potential, and turbidit MSD = Matrix spike duplicate PAH = Polycyclic aromatic hydroca PCB = Polychlorinated biphenyl			QC = Qualit SIM = Select VOC = Vola	tive ion mor							

EA Engineering, Science, and Technology, Inc., PBC

TABLE 9. PROPOSED FIELD PROGRAM FOR VAPOR INTRUSION INVESTIGATION

Sample Type Vapor Instrusio	Proposed Sample Area	Matrix	Sample Method	Sample Frequency	Sample Interval	Sample Identification	No. of Sample Locations	TO-15 SIM /TO-15
vapor instrusiv	Lorraine Process Area (LPA) Church		TO-15: 6-Liter Summa canister with 24-hour regulator	1 sub-slab or crawlspace 1 indoor per location (sampled once in winter and once in summer)	Sub-slab taken below slab	For sub-slab or crawl space air sample: LPA-SS-01 or LPA-CS-01 For indoor air sample: LPA-IA-01	2	2
Indoor Air/ Sub-Slab or Crawlspace	Lorraine Process Area Residence				Crawlspace taken in crawlspace Indoor air sample collected from within breathing zone (3 to 4 feet above ground surface) of the home	For sub-slab or crawl space air sample: LPA-SS-02 or LPA-CS-02 For indoor air sample: LPA-IA-02	2	2
	Wilcox Process Area (WPA) Residence	Air/Soil Gas				For sub-slab or crawl space air sample: WPA-SS-03 or WPA-CS-03 For indoor air sample: WPA-IA-03	2	2
Background	Upwind of sample locations in open area			Locations around perimeter of sampling area	5 to 8 feet off the ground	LPA-VIBG-01, LPA-VIBG-02, WPA-VIBG-03	4	4
Field duplicate	As close as possible, in space and time, to the original sample			1 outdoor location 1 sub-slab 1 indoor	Same as original sample	Same as original with "D" added to the ID, for example LPA or WPA-SS-01D	3	3
Total Vapor In	trusion Samples						13	13

SIM = Selective ion monitoring

TABLE 4. QUALITY ASSURANCE INDICATOR CRITERIA

Indicator Parameter	Analytical Parameter	QC Sample ^a	Acceptance Criteria for Laboratory Analysis						
Accuracy	VOCs, EDB, SVOCs, PAHs, TPH, PCBs (Aroclors), Pesticides, Dioxins/Furans	MS MSD Blanks ^b	50 to 150 percent recovery (MS/MSD) Less than CRQL (blanks)						
(percent recovery)	TAL Metals, Mercury, Hexavalent Chromium, Cyanide, AVS-SEM	MS LCS Reference samples Blanks ^a	75 to 125 percent recovery (MS) 80 to 120 percent recovery (LCS) Limits per supplier (reference sample) Less than CRDL (blanks)						
	VOCs, EDB, SVOCs, PAHs, TPH, PCBs (Aroclors), Pesticides, Dioxins/Furans	MS MSD Field duplicates	30 percent RPD (MS/MSD) 50 percent RPD (field duplicates)						
	Background PAHs and Dioxins/Furans via ICS	Field replicates	30 percent RPD (field replicates)						
Precision (RPD)	TAL Metals, Mercury, Hexavalent Chromium, Cyanide, AVS-SEM, Asbestos, General Chemistry Parameters	MS MSD or MD Field duplicates Laboratory duplicates	20 percent RPD (MS, MSD, MD aqueous) 35 percent RPD (MS, MSD, MD solid) 50 percent RPD (field duplicates) 25 percent (laboratory duplicates)						
	Background TAL Metals via ICS	Field replicates	30 percent RPD (field replicates)						
Sensitivity (quantitation limits)	Analytical tests	MS MD or MSD Field duplicates Laboratory duplicates	Not applicable						
Completeness	The objective for data complete	eness is 90 percent.							
Representativeness	The sampling network and analytical methods for this site are designed to provide data that are								
Comparability	The use of standard published sampling and analytical methods, and the use of OC samples, will ensure								

NOTES:

 $AVS = Acid\text{-volatile sulfide} \qquad \qquad PAH = Polycyclic \ aromatic \ hydrocarbon$

CRDL = Contract-required Detection Limit PCB = Polychlorinated biphenyl

CRQL = Contract-required Quantitation Limit QC = Quality control

EDB = Ethylene bromide RPD = Relative percent difference
ICS = Incremental Composite Sampling SVOC = Semivolatile organic compound
LCS = Laboratory control sample SEM = Simultaneously-extracted metal

MD = Matrix duplicate TAL = Target Analyte List

MS = Matrix spike TPH = Total petroleum hydrocarbons MSD = Matrix spike duplicate VOC = Volatile organic compound

^a Not all listed QC samples apply to all analytical parameters. QC samples are analytical method specific.

^b May include method blanks, reagent blanks, instrument blanks, calibration blanks, trip blanks and field blanks.

TABLE 12. PARAMETERS, METHODS, REQUIRED VOLUME, CONTAINERS, PRESERVATIVES, AND HOLDING TIMES

Parameter	Method	Volume and Container ¹	Preservatives	Holding Time ²
Air Samples	TD 1 TO 15 CD 1			20.1
VOCs	EPA TO-15 SIM	One 6-liter evacuated summa canister	None	30 days
Aqueous Samples Alkalinity	Standard Method 2320 B	One 250-milliliter HDPE bottle	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	7 days
			NaOH to pH >12;	
Cyanide	CLP ISM02.3	One 1-liter HDPE bottle	Store at $<6^{\circ}C$ (4+2°C)	14 days
Dioxins and Furans	CLP HRSM01.2	Two 1-liter amber glass bottles	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	360 days
Hardness	EPA Method 130.2	One 100-milliliter HDPE bottle	HNO ₃ to pH \leq 2; Store at $<$ 6°C (4+2°C)	6 months
Hexavalent Chromium	SW-846 Method 7199 or Standard Method 218.6	One 125-milliliter HDPE bottle	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	24 hours
Metals (including Hg)	CLP ISM02.3 (ICS/AES and ICS/MS)	One to two 1-liter HDPE bottles	HNO ₃ to pH \leq 2; Store at $<$ 6°C (4+2°C)	180 days (28 days for Hg)
PCBs (Aroclors)	CLP SOM02.3	Two 1-liter amber glass bottles	Store at <6°C (4+2°C)	7 days
Pesticides	CLP SOM02.3	Two 1-liter amber glass bottles	Store at <6°C (4+2°C)	7 days
SVOC SIM (PAHs)	CLP SOM02.3	Four 1-liter amber glass bottles	Store at <6°C (4+2°C)	7 days
SVOCs	CLP SOM02.3	Two 1-liter amber glass bottles	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	7 days
Total Dissolved Solids	EPA Method 160.1	One 1-liter HDPE bottle	Store at <6°C (4+2°C)	7 days
Total Organic Carbon	Standard Method 5310	One 250-milliliter glass bottle	H_2SO_4 to pH <2; Store at <6°C (4+2°C)	28 days
Total Suspended Sediment	ASTM Method D 3977-97	One 200-milliliter HDPE bottle	Store at <6°C (4+2°C)	7 days
VOCs	CLP SOM02.3	Three 40-milliliter amber glass VOA vials (filled to capacity with no headspace)	HCL to pH <2; Store at <6°C (4+2°C)	14 days
Soil and Sediment Samples	•	(fined to cupacity with no neudspace)	Store at 30 C (412 C)	
Asbestos	CARB Method 435	One 16-ounce glass jar	None	Unspecified
AVS/SEM	EPA 821/R-91-100 SW-846 Method 6010C/9034	One 8-ounce amber glass jar (filled to capacity)	Store at <6°C (4+2°C)	14 days
Cyanide	CLP ISM02.3	One 8-ounce glass jar with Teflon TM -lined cap	Store at $<6^{\circ}C (4+2^{\circ}C)$	14 days
Dioxins and Furans	CLP HRSM01.2	One 8-ounce amber glass jar with Teflon TM -lined cap	Store at <6°C (4+2°C)	360 days
Grain Size	ASTM Method D422	1-gallon plastic bag	None	Unspecified
Hexavalent Chromium	SW-846 Methods 3060 and 7199	One 8-ounce glass jar with Teflon TM -lined cap	Store at <6°C (4+2°C)	30 days
Metals (including Hg)	CLP ISM02.3 (ICP/AES and ICP/MS)	One to two 8-ounce glass jars with TeflonTM-lined caps	Store at <6°C (4+2°C)	180 days (28 days for Hg)
PCBs (Aroclors)	CLP SOM02.3	One 8-ounce amber glass jar with Teflon TM -lined cap	Store at <6°C (4+2°C)	14 days
Pesticides	CLP SOM02.3	One 8-ounce amber glass jar with Teflon TM -lined cap	Store at <6°C (4+2°C)	14 days
pН	SW9045D	One 8-ounce glass jar with Teflon TM -lined cap	Store at <6°C	Analyze immediately
SVOC SIM (PAHs)	CLP SOM02.3	One 8-ounce amber glass jar with Teflon TM -lined cap	Store at <6°C (4+2°C)	14 days
SVOCs	CLP SOM02.3	One 8-ounce amber glass jar with Teflon TM -lined cap	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	14 days
Total Organic Carbon	Walkley- Black	One 8-ounce amber glass jar with Teflon Timed cap	Store at $<6^{\circ}C$ (4+2°C)	28 days
	CLP SOM02.3	Three 5-gram coring tool devices (e.g., EnCore) samplers and one 4-ounce glass jar		,
VOCs	SW-846 Method 5035 or 5035A (VOC sample preparation)	Three closed-system pre-weighed 40-milliliter amber glass vials	Store at $<6^{\circ}C$ (4+2°C)	48 hours
I NADI Campla	, , , , , , , , , , , , , , , , , , ,	with magnetic stir bar and one 4-ounce glass jar		
LNAPL Sample C3-C44 Whole Oil or	ASTM Method D3328 or ASTM			
C8-C40 Full Scan	Method 5739	Two 40-milliliter VOA vials	Unpreserved	Unlimited
Alkyl Leads, EDB, MMT	EPA 8080 Modified (GC/ECD)	Two 40-milliliter VOA vials	Unpreserved	Unlimited
Investigation-derived Waste				
Reactivity	SW-846 Chapter 7	One 4-ounce glass jar with Teflon TM -lined cap	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	72 hours
Corrosivity (pH soil)	SW-846 Method 9045	One 4-ounce glass jar with Teflon TM -lined cap	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	72 hours
Corrosivity (pH liquid)	SW-846 Method 9040	One 500-milliliter glass bottle	Store at <6°C (4+2°C)	72 hours
Corrosivity (steel)	SW-846 Method 1110	One 4-ounce glass jar One 250-milliliter HDPE bottle	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$ Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	7 days
Ignitability (solids)	SW-846 Method 1030	One 4-ounce glass jar	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	14 days
Ignitability (liquid)	SW-846 Method 1010 or 1020	One 250-milliliter HDPE bottle	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	14 days
TPH GRO	TX Method 1005	One 4-ounce amber glass jar	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	14 days
TPH DRO and ORO		(filled to capacity)	Store at $<6^{\circ}\text{C} (4+2^{\circ}\text{C})$	•
TCLP Metals ³	SW-846 Methods 1311, 3010, 6010, and 7470	100 grams minimum (solid) or 1 liter minimum (liquid) Plastic or glass container	Store at <6°C (4+2°C)	180 days (28 days for Hg)
TCLP SVOCs	SW-846 Methods 1311, 3510, and 8270C	100 grams minimum (solid) or 2 liters minimum (liquid) Glass containers	Store at <6°C (4+2°C)	14 days
TCLP VOCs	SW-846 Methods 1311 and 8260B	50 grams minimum (solid) or 120 milliliters minimum (liquid) Glass containers	Store at <6°C (4+2°C)	14 days

 $SEM = Simultaneously \ extracted \ metals$

NOTES:

AES = Atomic emission spectroscopy HNO_3 = Nitric acid

 $ASTM = American \ Society \ for \ Testing \ and \ Materials \\ ICP = Inductively-coupled \ plasma$

AVS = Acid volatile sulfide MMT = Methylcyclopentadienyl manganese tricarbonyl CARB = California Air Resource Board MS = Mass spectrometry

 $\begin{aligned} & \text{CLP} = \text{Contract Laboratory Program} & \text{NaOH} = \text{Sodium hydroxide} \\ & \text{DRO} = \text{Diesel range organics } C_{10} - C_{28} & \text{ORO} = \text{Oil range organics} > C_{28} \\ & \text{ECD} = \text{Electron capture detector} & \text{PAH} = \text{Polycyclic aromatic hydrocarbon} \\ & \text{EDB} = \text{Ethylene dibromide} & \text{PCB} = \text{Polychlorinated biphenyl} \end{aligned}$

 $GRO = Gasoline range organics C_6 - C_{10}$ SIM = Selective ion monitoring $H_2SO_4 = Sulfuric acid$ SVOC = Semivolatile organic compound

HCL = Hydrochloric acidTCLP = Toxicity Characteristic Leaching ProcedureHDPE = High-density polyethyleneTPH = Total petroleum hydrocarbons

HDPE = High-density polyetnylene

Hg = Mercury

VOC = Volatile organic compound

 $GC = Gas \ chromatography$

¹ It will be necessary to verify container requirements with the laboratory at the time of scheduling.

 $^{^2}$ Holding time is measured from the time of sample collection to the time of sample extraction and/or analysis.

³ Arsenic, barium, cadmium, chromium, lead, mercury, silver, and selenium